

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 03/00520

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G01V3/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G01V H01Q G01S

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| A | US 6 094 157 A (COWDRICK DENNIS H) 25 July 2000 (2000-07-25) abstract; figures 8-11 column 11, line 8 - line 54 ----- | 1 |
| A | US 6 091 354 A (BECKNER FREDERICK L ET AL) 18 July 2000 (2000-07-18) abstract; figure 4C column 7, line 35 - line 45 ----- | 1 |
| A | US 6 084 412 A (GUO YANPING ET AL) 4 July 2000 (2000-07-04) abstract; figure 1 column 3, line 56 -column 4, line 25 ----- | 1 |
| A | US 5 634 378 A (BURKHARDT JR FRED R ET AL) 3 June 1997 (1997-06-03) abstract; figure 1 ----- | 1 |

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority, claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

4 April 2003

16/04/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+31-70) 340-3016

Authorized officer

Niemeijer, R

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/00520

| Patent document cited in search report | Publication date | Patent family member(s) | | Publication date |
|--|------------------|-------------------------|--------------|------------------|
| US 6094157 | A 25-07-2000 | AU 4243597 A | GB 2332799 A | 26-03-1998 |
| | | WO 9810310 A1 | | 30-06-1999 |
| US 6091354 | A 18-07-2000 | NONE | | |
| US 6084412 | A 04-07-2000 | US 2002030492 A1 | | 14-03-2002 |
| US 5634378 | A 03-06-1997 | NONE | | |

INTERNATIONAL SEARCH REPORT

| |
|---|
| International Application No PCT/EP 03/00520 |
|---|

| |
|--|
| A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G01V3/12 |
|--|

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G01V H01Q G01S

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| A | US 6 094 157 A (COWDRICK DENNIS H) 25 July 2000 (2000-07-25) abstract; figures 8-11 column 11, line 8 - line 54 --- | 1 |
| A | US 6 091 354 A (BECKNER FREDERICK L ET AL) 18 July 2000 (2000-07-18) abstract; figure 4C column 7, line 35 - line 45 --- | 1 |
| A | US 6 084 412 A (GUO YANPING ET AL) 4 July 2000 (2000-07-04) abstract; figure 1 column 3, line 56 -column 4, line 25 --- | 1 |
| A | US 5 634 378 A (BURKHARDT JR FRED R ET AL) 3 June 1997 (1997-06-03) abstract; figure 1 ----- | 1 |

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the International filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the International filing date but later than the priority date claimed

- *T* later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *8* document member of the same patent family

Date of the actual completion of the international search

4 April 2003

Date of mailing of the international search report

16/04/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax. (+31-70) 340-3016

Authorized officer

Niemeijer, R

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/EP 03/00520

| Patent document cited in search report | Publication date | Patent family member(s) | | Publication date |
|--|------------------|-------------------------|--------------------------------------|--|
| US 6094157 | A 25-07-2000 | AU GB WO | 4243597 A 2332799 A 9810310 A1 | 26-03-1998 30-06-1999 12-03-1998 |
| US 6091354 | A 18-07-2000 | NONE | | |
| US 6084412 | A 04-07-2000 | US | 2002030492 A1 | 14-03-2002 |
| US 5634378 | A 03-06-1997 | NONE | | |